

II. AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for modeling a behavior of an LPAR (logical partition) in a simulated computer operating in a time slice dispatch mode, comprising:
 - beginning a modeling interval;
 - calculating a resource percentage representing a percentage of total resources allocated to the LPAR, wherein the resource percentage is equal to: $100\% - \text{a percentage of resources allocated to all other LPARs running in the simulated computer}$;
 - calculating a time slice percentage for the LPAR based on the resource percentage and CP (central processor) data, wherein:

$$\text{time slice percentage} = \frac{(\text{resource percentage}) \times (\# \text{ of physical CPs})}{(\# \text{ of logical CPs})};$$

- determining a CP (central processor) percentage representing a percentage of time that all physical CPs in the computer being modeled have been allocated to the LPAR;
- if the CP percentage is greater than the time slice percentage, causing the simulated computer not to dispatch CPs to the LPAR; and
- outputting and displaying the behavior of the modeling.

2. (Original) The method of claim 1, including the further step of repeating each of the recited steps for a next modeling interval.
3. (Cancelled).
4. (Currently Amended) The method of claim [[3]] 1, wherein the percentage of resources allocated to all other LPARs is based on a weighting factor specified for each LPAR, a number of logical CPs allocated to each LPAR, and a MIPs (million instructions per second) value for each LPAR.
5. (Original) The method of claim 4, wherein the MIPs value represents a maximum consumption that each LPAR could consume in an unrestrained processor.
6. (Cancelled).

7. (Currently Amended) A tool for simulating operation of a computer having a system for modeling a behavior of an LPAR operating in a time slice dispatch mode, the modeling system comprising:

at least one computer comprising:

a system for calculating a resource percentage, wherein the resource percentage represents a percentage of total resources allocated to the LPAR, wherein the resource percentage is equal to: 100% - a percentage of resources allocated to all other LPARs running in the computer simulation;

a system for calculating a time slice percentage for the LPAR based on the resource percentage and CP (central processor) data, wherein:

time slice percentage = (resource percentage) x (# of physical CPs)

(# of logical CPs);

a system for determining a CP (central processor) percentage, wherein the CP percentage represents a percentage of time that all physical CPs in the computer being modeled have been allocated to the LPAR;

a system for determining causing the computer simulation not to dispatch CPs to the LPAR for a current modeling interval if the CP percentage is greater than the time slice percentage; and

a system for outputting the behavior of the modeling.

8. (Cancelled).
9. (Currently Amended) The tool of claim ~~[[8]]~~ 7, wherein the percentage of resources allocated to all other LPARs is based on a weighting factor specified for each LPAR, a number of logical CPs allocated to each LPAR, and a MIPS (million instructions per second) value for each LPAR.
10. (Original) The tool of claim 9, wherein the MIPS value represents a maximum consumption that each LPAR could consume in an unrestrained processor.
11. (Cancelled).

12. (Currently Amended) A program product stored on a computer readable medium for modeling a behavior of an LPAR (logical partition) in a simulated computer operating in a time slice dispatch mode, comprising:

means for calculating a resource percentage, wherein the resource percentage represents a percentage of total resources allocated to the LPAR, wherein the resource percentage is equal to: 100% - a percentage of resources allocated to all other LPARs;

means for calculating a time slice percentage for the LPAR based on the resource percentage and CP (central processor) data, wherein:

$$\text{time slice percentage} = (\text{resource percentage}) \times (\# \text{ of physical CPs}) \\ (\# \text{ of logical CPs});$$

means for determining a CP (central processor) percentage, wherein the CP percentage represents a percentage of time that all physical CPs in the computer being modeled have been allocated to the LPAR;

means for determining causing the computer simulation not to dispatch CPs to the LPAR for a current modeling interval if the CP percentage is greater than the time slice percentage; and

means for outputting and displaying the behavior of the modeling.

13. (Cancelled).

14. (Currently Amended) The program product of claim ~~[[13]]~~ 12, wherein the percentage of resources allocated to all other LPARs is based on a weighting factor specified for each LPAR, a number of logical CPs allocated to each LPAR, and a MIPs (million instructions per second) value for each LPAR.

15. (Cancelled)

16. (Currently Amended) A method for modeling workload performance of a plurality of LPARs (logical partitions) in a computer simulation, comprising:

providing a model for each LPAR specified in the computer simulation, wherein each model includes a defined consumption that is dependent on a consumption of the other LPARs;

setting an initial defined consumption for each model;

running each model and determining an observed consumption for each model;

comparing the observed consumption with the defined consumption for all of the models; and

for each model that has an observed consumption that does not agree with the defined consumption, feeding the observed consumption back to the other models;

adjusting the defined consumption of each model based on the feedback;

iteratively repeating the running, comparing, feeding and adjusting steps until the observed consumption agrees with the defined consumption for each model; and

outputting and displaying the modeled workload performance.

17. (Original) The method of claim 16, wherein the consumption is a measure of processor resources consumed by each LPAR.

18. (Currently Amended) A computer simulation tool for modeling workload performance of a plurality of LPARs (logical partitions), comprising:

at least one computer comprising:

a system for building a model for each LPAR specified in the computer simulation, wherein each model includes a defined consumption that is dependent on a consumption of the other LPARs;

a system for running each model and determining an observed consumption for each model;

a system for comparing the observed consumption with the defined consumption for all of the models;

a system for feeding back the observed consumption to the other models from each model that has an observed consumption that does not agree with the defined consumption;

a system for adjusting the defined consumption of each model based on the observed consumption feedback;

a system for iteratively rerunning each model until the observed consumption agrees with the defined consumption for each model; and

a system for outputting the modeled workload performance.

19. (Currently Amended) A program product stored on a recordable medium for modeling workload performance of a plurality of LPARs (logical partitions), comprising:

- means for specifying a model for each of a plurality of LPARs, wherein each model includes a defined consumption that is dependent on a consumption of the other LPARs;
- means for running each model and determining an observed consumption for each model;
- means for comparing the observed consumption with the defined consumption for all of the models;
- means for feeding back the observed consumption to the other models from each model that has an observed consumption that does not agree with the defined consumption;
- means for adjusting the defined consumption of each model based on the observed consumption feedback;
- means for iteratively rerunning each model until the observed consumption agrees with the defined consumption for each model; and
- means for outputting and displaying the modeled workload performance.

20. (Currently Amended) A computer simulation tool for modeling LPAR behavior, comprising:

at least one computer comprising:

a first algorithm for modeling the behavior of an LPAR (logical partition)

operating in a time slice dispatch mode;

a second algorithm for modeling the behavior of a plurality of LPARs, wherein the second algorithm includes:

means for specifying a model for each of a plurality of LPARs, wherein each model includes a defined consumption that is dependent on a consumption of the other LPARs;

means for running each model and determining an observed consumption for each model;

means for comparing the observed consumption with the defined consumption for all of the models;

means for feeding back the observed consumption to the other models from each model that has an observed consumption that does not agree with the defined consumption;

means for adjusting the defined consumption of each model based on the observed consumption feedback;

means for iteratively rerunning each model until the observed consumption agrees with the defined consumption for each model; and

[a] means for outputting the modeled LPAR behavior.

21. (Previously Presented) The computer simulation tool of claim 20, wherein the first algorithm includes:

means for calculating a resource percentage, wherein the resource percentage represents a percentage of total resources allocated to the LPAR;

means for calculating a time slice percentage for the LPAR based on the resource percentage;

means for determining a CP (central processor) percentage, wherein the CP percentage represents a percentage of time that all physical CPs in a computer being modeled have been allocated to the LPAR; and

means for determining causing the computer simulation not to dispatch CPs to the LPAR for a current modeling interval if the CP percentage is greater than the time slice percentage.

22. (Cancelled)